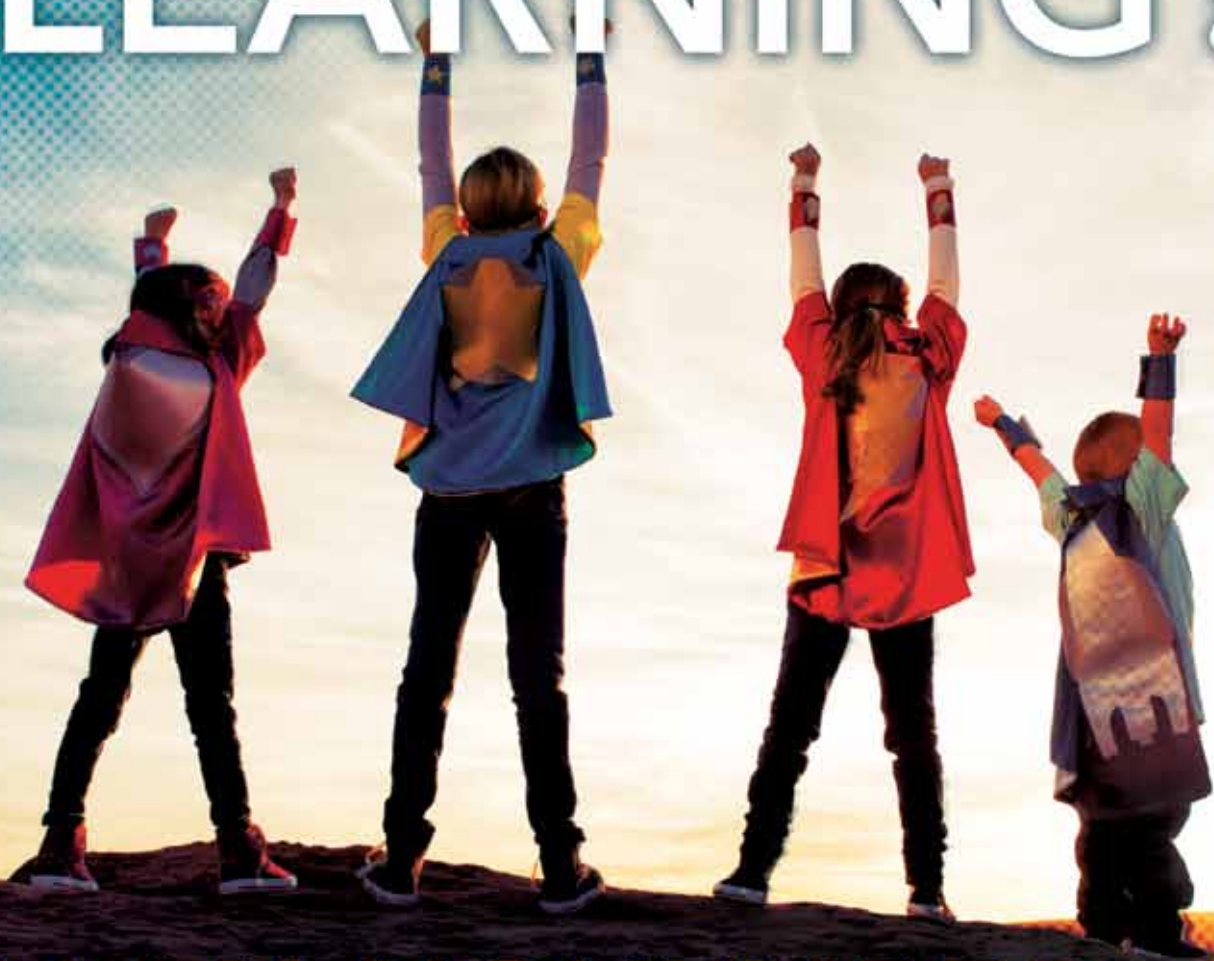
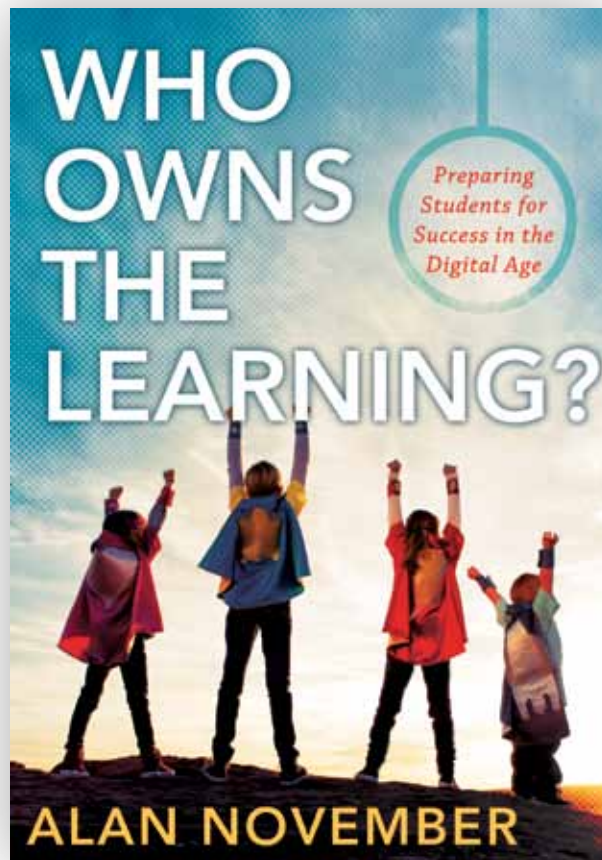


# WHO OWNS THE LEARNING?

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# Welcome to the Digital Learning Farm

My own experience with students making a contribution to community began in the winter of 1976 when I was a high school science teacher in the Boston Public School system. I leased an abandoned barbershop for a dollar; the shop was on Dudley Street, in a row of storefronts tucked below an overhead subway station. The city was going to relocate the station, and all of the buildings below it were scheduled for eventual demolition. In the meantime, the city of Boston auctioned them off for temporary use. My one-dollar bid for the barbershop was a winner!

I had been inspired to bid on the barbershop by an odd twist of fate, a medical emergency that brought together my roommate (a medical student) and one of my own students, a sixteen-year-old boy. My student had been taken by ambulance to the hospital where my roommate was a resident. The boy had no medical records and had not seen a doctor in years. My roommate was frustrated that the boy's family had failed to take advantage of the free medical care available in clinics across the city. He urged me, "Please teach your students how to access Boston's free clinics. This kid could have avoided his crisis completely if he had walked into a clinic weeks earlier and been treated before his ailment became serious."

When I read about the Dudley Street subway auction in the paper, I imagined the barbershop as the perfect headquarters for a community health information center. Location, location, location! Along with thousands of other Boston commuters, I passed that space every day as I got off the Orange Line subway and walked the few blocks to Roxbury High School. It was where many of my students hung out in the morning and after school. I knew the intimate scale of the barbershop with the original leather chairs and marble sinks would make a wonderful space for a health information center. But would my students get as excited as I was about converting it to a community resource? Excited enough to volunteer their work? I soon found out.

Immediately, students signed up to paint the outside of the barbershop. We chose a hideous lime green so it would stand out. The students scoured the local neighborhoods, gathering brochures about medical services. They cleaned the place up and organized brochures along the counter next to the barber chairs. Students who

never did their homework and often skipped school showed up for their volunteer work. Unlike my classroom experiences, many of my students worked harder than I did in our health information center. The time they spent there was fun and productive. No grades, no assessment; just honest work to make a difference in the community.

The barbershop was a magical place where I learned as much as my students. Perhaps my most valuable lesson came from seeing the transforming power of authentic work for students who were traditionally unsuccessful in school. I realized that many students work harder to achieve a meaningful purpose than to earn a grade. I also realized that by giving students an opportunity to make a contribution, you can see them in wonderful new ways—how helpful they are, and how kind, considerate, and attentive they can be.

Not too many generations ago, young people were expected to engage in work with purpose—caring for farm animals, repairing equipment, selling food at local markets, and helping to care for younger children in the family. These responsibilities taught children the value of hard work and a strong sense of accomplishment.

Over time, mechanization eliminated much of the need for child labor. Gaining an education became the primary responsibility of most young people; they were not expected to be productive members of society until they entered the workforce as educated adults. Today, we rarely expect young people to be contributors. Few young people have opportunities to pursue work that has a purpose. I think that is a terrible loss for our society as a whole, but I also think it doesn't have to be that way.

Just as mechanization reduced our dependence on child labor, advancing technologies have brought us full circle in the potential for purposeful work among school-age children. Social media, mobile devices, and other information and communication tools enable students to make contributions to their classrooms and their communities and to extend the benefits of those contributions across the globe. As educators, parents, and leaders, it is our responsibility to give students the opportunities to put these capabilities to work.

The Digital Learning Farm model does just that. It leverages inexpensive and easy-to-use technologies to challenge and support more active participation of students and to give them more ownership in the educational process as tutorial designers, scribes, researchers, global communicators and collaborators, and more. This approach restores the dignity and integrity of the child as a contributor, even as it teaches students skills that will help them compete with peers from around the world. Pioneering teachers across the United States are adopting the Digital Learning Farm model by taking technologies out of the project mold and making them a fundamental part of the learning experience, and by giving students rigorous and more motivating assignments that prepare them to become more productive in our new global economy. These educators are helping their students leave a lasting legacy within their learning communities. It's an exciting time!

In this chapter, we'll take a closer look at the Digital Learning Farm model and some of the educators and students who are pioneering its methods. We begin, however,

with a brief overview of the big-picture issues driving the need for this model, including the shifts in the culture of work that are triggering the need for changes in our culture of learning. We'll walk through some positive steps we can take to reframe our educational structure to support the type of self-directed, collaborative educational model represented by the Digital Learning Farm. Finally, we take a look at the roles of everyone involved in this model, from superintendents and principals to teachers, librarians, and students. I will describe four student jobs within the Digital Learning Farm and some of the creative ways students who do this work are making valuable contributions to their learning communities. While educators can implement any of these jobs individually, the stories offered in this chapter will illustrate that these jobs help create a balanced approach to teaching and learning and enable teachers *and* students to work smarter.

### Drive and Purpose

In his best-selling book *Drive*, author Daniel Pink (2009) points out that the most important predictors of high-quality work are autonomy, mastery, and purpose. How well does our traditional educational model promote these three elements in our students' lives? We typically blame students for being unmotivated and for underperforming, but many of our students have very little autonomy and are rarely allowed to direct their own learning. As for mastery, many students have little opportunity to master subjects; the curriculum is covered, and the class moves on.

Purpose may be the most important of Pink's three predictors of quality when it comes to daily school work. Beyond earning a grade, many of our students see no higher purpose in their work efforts. Yet nearly every educator you will read about in *Who Owns the Learning?* says that their students often ask for—or willingly produce on their own—extra work, *when they believe that work has purpose*.

What if we could apply autonomy, mastery, and purpose to the learning culture for every student? That is the goal that drives the Digital Learning Farm model; to create a culture of learning in which students feel autonomous, masterful, and purposeful.

## A New Culture of Learning for a New Culture of Work

We hear a lot about the technology revolution, but sometimes much of what we hear misses the point. While we often focus on the growth of social media and Internet access, technology's most profound impact has been on the very concept of work. Information communications technology is completely reorganizing how, where, when, with whom, and even why people work. This global cultural evolution is redefining our notion of jobs; as a result, we see an emerging enterprise-centered

workforce in which workers manage their own businesses and sell their services to many different customers across a globally connected market. In his book *Strategic Planning in America's Schools*, William Cook (1995) observes: "Truly educated people of the next century will not apply for a job. They will create their own" (p. 32).

The transformation of the workplace that Cook describes is well underway. As best-selling author Thomas Friedman (2005) notes in *The World Is Flat*, we live in a world where work can move overnight to anyone who is connected to the Internet and can provide the work cheaper, better, faster, or all three. The move to in-home offices has boomed. High-performance workers need to be self-directed and interdependent. Learning how to learn is an essential lifelong skill. Global empathy is a critical skill for anyone hoping to identify global opportunities and secure foreign markets and customers.

This new work culture isn't limited to white-collar workers. At John Deere, welders have moved from a traditional workplace format in which they were told what to do and when to do it, into a format in which they strategically direct their own work. Using information and communication technologies, a John Deere welder in Moline, Illinois, can connect in real time with another welder in Germany, and together they can collaborate to solve problems and become more proficient at their work. In the words of one welder, "I no longer park my brain at the gate before I come into the plant" (personal communication, October 1993).

If technology is turning the industrial concept of the highly managed worker into a social artifact, how should educators prepare students for this new economic and cultural reality? Simply adding technology—the thousand-dollar pencil—to the current highly prescribed school culture won't help very much. Ironically, that common educational approach has served to freeze the industrial model of work in place. I have visited contemporary laptop schools that, for the most part, look and function exactly as they did in 1981 when I began teaching with computers. Successful implementation of technology into K–12 education is much more complex than providing students with access to computers and moving content to online courses. Instead, we have to teach students to use information and communication technologies to innovate, solve problems, create, and be globally connected. By enabling students to drive aspects of their educational experience, shape their involvement within it, and seek higher purpose by making educational contributions that benefit others, we can bring our educational approach in alignment with the changes in the global workplace.

The Digital Learning Farm model offers just such an approach. It rebalances the control of learning, giving more of the control to learners. The technology infrastructure, while essential, isn't the central issue in the educational process. Instead, technology is simply the means that makes the process possible, by giving educators, students, and parents opportunities to adopt new roles and relationships.

The Digital Learning Farm model changes the culture of learning, giving students much more responsibility by encouraging them to be collaborators, contributors, and researchers. At the heart of the model are ideas that address essential questions for educators: Who owns the learning? How much autonomy can we afford to give

our students? How much purpose can we design into school work? And how can we design learning environments that lead to mastery? See table 1.1 to see how the Digital Learning Farm model compares to education's traditional model.

**Table 1.1: How the Digital Learning Farm Compares to the Traditional Educational Model**

Traditional Educational Model	Digital Learning Farm Model
It features the same prescribed assignments and rubrics for all students.	Students design more of their own assignments and rubrics.
There is an audience of one (the teacher).	It has the capacity for a worldwide, authentic audience.
Reward and punishment are external (in the form of a grade).	There is opportunity for more intrinsic rewards.
Student work is not leveraged to help all students learn.	All students contribute to the learning processes of the entire class and to learners around the world.
The critical skill is to know how to be taught.	The critical skill is to learn how to learn.
The limit of learning is what the teacher already knows.	Students research content beyond the teacher's knowledge.
The curriculum is covered regardless of students' mastery.	There are more opportunities for mastery.
Students rely on their teacher for help.	Students rely on their teacher and the whole class for help.
Parents have limited access to day-to-day student creativity.	There is an increased opportunity for parents to see creative student work.
Technology reinforces the current industrial culture.	Technology is used as a transformational tool to change the culture of teaching and learning.

Unlearning is more difficult than learning something new, and one of our most important challenges is to let go of existing structures in order to build more effective ones. We still have too many schools that focus their planning efforts on technology instead of on information and global communications. That technocentric focus does not create new models of learning; it merely bolts new tools on top of the current learning environment. By focusing on information systems and the flow of communication, we can define and develop a new educational framework. Then we will be better able to look beyond technology in our search for ways of collaborating for and with our children as we help them become independent, critical leaders of their own work.

## Reframing the Educational Structure

The Digital Learning Farm model represents an educational environment that can foster the skills and qualities that embody the autonomy, purpose, and mastery students need in order to succeed

*continued* →

in a global economy and thrive as lifelong learners. Adopting it will require some remodeling of our current educational structure, though. Here are some important steps for building a framework to support the Digital Learning Farm model:

- **Increase the autonomy for students**—By giving students more responsibility for designing their own homework, in-class projects, tutorials, curriculum content, and even the methods by which they're assessed, we can engage the students' attention and energize their participation in the educational process. As a result, we can achieve better learning, create a more pleasant educational environment, and get more benefit from the time educators spend in preparation and presentation.
- **Publish student work to a global audience**—We should expect all students to create knowledge products and publish them for authentic feedback. For examples of this process in action, look at Kathy Cassidy's first-grade blog from Moose Jaw, Saskatchewan and Eric Marcos's sixth-grade math tutorials at Mathtrain.TV from Santa Monica, California. Visit [http://classblogmeister.com/blog.php?blogger\\_id=1337](http://classblogmeister.com/blog.php?blogger_id=1337) to read Ms. Cassidy's blog.
- **Create a community of contribution within the classroom**—We have amazing new tools for linking student projects so that every student's work has the potential to benefit all learners. Check out the notes from Darren Kuropatwa's calculus students from Winnipeg, Manitoba, which we talk about in detail in chapter 3 (page 39).



## Starting at the Top: Redefining the Role of Superintendents and Principals

Any successful organizational evolution relies on strong leadership. In adopting a new educational model, superintendents and principals must lead the way. I can't overstate the importance of the role of a leader in setting policy, modeling the learning process, and encouraging expanded learning opportunities for students, teachers and school administrators—all critical elements in building a solid foundation for learning in a 21st century school environment.

Eric Williams, superintendent of the Yorktown School Division in Yorktown, Virginia, is convinced that principals who use digital resources in their own work make better role models for teachers and students in the Digital Learning Farm model. One way that he helps introduce educational leaders to these resources is through what he calls the *Digital Playground*. Unlike a traditional technology

workshop, the Digital Playground is a monthly gathering that gives principals a chance to play around with the kinds of tools and technologies being used by students in the classroom. There are no formal presentations, but principals from throughout the school district get together and learn how to play with emerging information and communication tools that their students are using. They might learn, for example, how to post news on a school website rather than writing and distributing a weekly newsletter. By opening up to the innovative and creative possibilities of digital tools, these leaders can find better, more enjoyable ways to do their own jobs, while at the same time, serving as a role model for everyone engaged in the educational process. Conversations also include opportunities for transforming learning. Eric has made a commitment that all principals should foster a professional culture that encourages teachers to support student contribution.

Superintendents and principals must lead the cultural evolution of education by establishing an expectation that supports self-directed professional growth and more collaboration among teachers, not just within their school community, but globally as well. By doing so, they set the tone for teachers to create learning environments that bring these same qualities to the classroom.

James Tracy, headmaster of the Cushing Academy in Ashburton, Massachusetts, along with his educational team, breathed new life into their school library by rehabilitating the space into a vibrant microclimate for individual study and the collaborative exchange of ideas.

To reposition Cushing as a K–12 incubator school, James and his team began treating the academy as an entrepreneurial school. In that context, they had a series of meetings about what to do with the library. The large space was grossly underutilized; in fact, surveys found that students weren't using the library for research purposes at all. Instead, they drew information from online sources—often unreliable ones. James and his team decided that rather than continue to maintain the book vault library, they would put their money into a database that would provide access to peer review journals and other reliable sources, and then teach students the value of utilizing these sources (rather than citing information that came from a blog someone was running out of his or her mother's basement).

James's next challenge was to find a better way to use the library space. Surprisingly, he found a model that made sense for the school's new library in an open, collaborative space at the Google offices in Mountain View, California. Following that model, Cushing took out bookshelves and turned the library into a common study and interactivity space. In addition to quiet cubicles for individual study, the library had spaces set up for students to work in groups of two or more—what James calls “microclimates of interactivity.” The spaces offered multimedia interactive displays, monitors, and so on, so students could access and shape information in ways that furthered their discussion. Next, the school moved the faculty mailroom into the library so every teacher would have to go in there every day. As a result, there was more use of the library, more collaboration between students, and more interaction between students and faculty. “It's a huge success!” says James. “There are more students in

the library than any other room on this forty-three-building campus at any given time” (personal communication, January 2012).

With so many more students using the library and with so much more information available from it, Cushing had to add another full-time librarian to its staff. The students recognize the need for librarians now more than ever, because they’re faced with an information overload that they haven’t had to grapple with before. They’re also learning advanced techniques for digital research using legitimate, verifiable sources. Librarians now work flextime, so one of them is always available for student questions via texting and email. Today, the library at Cushing Academy is accessible anywhere, anytime—and so are its librarians.

### **Transforming the School Library**

The school librarian plays a critical role in helping the faculty and students transition to the Digital Learning Farm model. Every library can become a global communications center where students connect with partners around the world to collaborate and create work, and to present that work to authentic global audiences. Librarians can also be critical resources for their colleagues by helping other educators learn how to connect with classrooms around the world, and learn how to guide their students in these collaborative processes. In chapter 4 (page 49), you will learn more about the innovative ways librarians are helping to reshape the educational culture and student work on the Digital Learning Farm.

## **Standing on Our Shoulders: The Role of Teachers in the Digital Learning Farm Model**

As stated previously, the Digital Learning Farm model represents a shift of control in the educational process as students take more responsibility for designing and implementing educational experiences. Rather than diminishing the importance of teachers, this shift makes their role even more critical to the educational process. Rather than simply focusing on the transfer of knowledge process, teachers in the Digital Learning Farm model guide students in the complex tasks of innovation and problem solving, and in doing work that makes a contribution to the learning processes of others. While teachers remain responsible for ensuring that the curriculum is covered, student contributions to the learning experiences deepen their understanding of curriculum content.

Teaching in the Digital Learning Farm model doesn’t require a strong command of specific technical tools and skills; instead, it leverages educators’ ability to tap the underestimated value of student contribution. Teachers continue to ensure that student work is meeting expectations and that there is clear evidence of student

learning, but they also empower students to be more autonomous and more collaborative. For example, teachers may create assignments and in-class activities, while student-generated content helps the class master material. As Eric Marcos's library of student-generated math tutorials exemplifies, not only do students in this model help others in their class, but their work can help students from around the world and in years to come. As you are reading this book, there may be dozens of students from around the world learning math processes by watching tutorials on Mathtrain.TV (you will learn more about Eric's class and its work in the next chapter).

One of the most important tasks for educators adopting the Digital Learning Farm model is finding the right beginning. Often that means identifying a single project that the teacher can work through with the class, one that spawns new ideas for new learning experiences. The stories you will read about in this book provide plenty of fuel to begin the journey; the energy of discovery will drive educators and students to continue creating new goals and finding new directions. Leading the transition to this model can be fun—but it's still a transition. That transition involves changing our understanding of student motivation *and* our expectations for student contribution and collaboration.

Consider this: when my son Dan was in high school, he used five basic tools for managing his self-created content (music and writing), communicating with the world, and accessing entertainment: Facebook, his iPod, Instant Messenger, YouTube, and video games. Of course he also had a cell phone, which he would often sneak into school. (I knew this because every once in a while I would receive a text message from Dan about his day.) Otherwise, in school, he had no access to the tools he loved to use. In fact, he was taught that they have nothing to do with learning.

At home, he chose his applications and easily moved from one to another. He was self-taught, self-directed, and highly motivated. He was locally and globally connected. But it is safe to say that Dan was not as engaged at school. He was not valued for being self-directed or globally connected. For instance, he wasn't allowed to download any of the amazing academic podcasts available, from "Grammar Girl" to "Berkeley Physics," to help him learn. When he was studying the American Revolution, he was not connected via Skype to students in England, which might have created an authentic debate about the American Revolution's origins that could have been turned into a podcast for the world to hear. His assignments did not automatically turn into communities of discussion in which students helped each other at any time of the day. His school successfully blocked these tools from campus. In fact, in many schools, educators label these effective learning tools as hindrances to teaching.

What do schools accomplish by blocking students from learning how to use social media as tools for learning and educational contribution? Yes, these tools can be disruptive to the highly structured learning environment of the traditional school. But what if we could have the best of both worlds? What if we could use the allure of Facebook, Twitter, YouTube, and other similar tools to empower students to be autonomous, masterful, and purposeful in their academic work? Clearly, when students leave the filtered environment of school and make their own decisions about

using social media, they are choosing to create content, to collaborate with friends, and to be globally connected.

If we could embrace the tools many school districts are blocking (which are also essential tools for participating in the global economy and culture), we could build much more motivating and rigorous learning environments. The Digital Learning Farm model gives us an opportunity to co-opt the tools our young people want to use, and reframe them as potent engines for driving a more meaningful educational experience. With that shift, we would have an opportunity to teach the ethics and the social responsibility that accompany the use of such powerful tools. These tools can be a major distraction from learning or they can be a major catalyst to it. Our students will benefit from the pioneering educators who work with students to explore the power of these tools and, in turn, empower students to be lifelong learners and active shapers of a world we cannot yet imagine.

## Owning Their Learning: Student Jobs on the Digital Learning Farm

Perhaps the greatest role shift in the Digital Learning Farm model is that of the student. As we help to transform students from passive receptors of information into active drivers of their educational experiences and designers of their educational goals, we need to provide them with the incentives of meaningful work and authentic audiences. Here are the four types of jobs for students that we will discuss in this book:

1. Tutorial designers
2. Student scribes
3. Student researchers
4. Global communicators and collaborators

### *Tutorial Designers*

Students often learn better from other students; they listen more intently, understand more completely, and participate more readily. Using webcams, video software, and other freely available recording and broadcasting tools, students can create tutorials that other students, parents, and viewers can access and use from any location. As you will learn in chapter 2 (page 25), teacher Eric Marcos and his students from Lincoln Middle School in Santa Monica, California, have energized their school through the use of screencasted tutorials they produce. Creating tutorials increases student engagement and provides struggling students with more opportunities for reviewing troubling concepts. As one of Eric's students reminds us, "In order to teach it you really have to learn it" (personal communication, December 2011).

## *Student Scribes*

Not all students take excellent notes every day, but free online collaboration tools can give any class the opportunity to collaboratively build one set of perfect notes. Using a shared blog, wiki, Google Docs (<http://docs.google.com>), or another collaborative writing tool, students work together to create a detailed set of notes that can be used by the entire class. (Visit **[go.solution-tree.com/instruction](http://go.solution-tree.com/instruction)** for live links to the websites mentioned in this book.) Darren Kuropatwa, a high school calculus teacher, uses this student scribe technique to transform his classroom into a collaborative learning community. In chapter 3 (page 39), you will learn more about Darren's student scribe program (<http://tinyurl.com/68djoz>) in which each day a new student is responsible for taking notes and collecting diagrams that become part of his class's online calculus textbook. Using a student scribe program encourages students who don't take notes to do so, and it helps students who struggle to take good notes improve their technique through positive feedback and advice from their teachers and peers.

## *Student Researchers*

Many classrooms have one computer sitting in the back of the room or on the teacher's desk that gets very little use while instruction is taking place. What if that computer became the official research station where one student each day was responsible for finding answers to all the questions in class—including the teacher's questions? Assigning students the research job can be a very effective learning tool, and it's an incredibly simple process: each day, assign a different student to sit by that computer. When questions come up during class, it is that student's responsibility to search out the correct answer. In chapter 4 (page 49), you will learn details about using this student job to build a class search engine that meets course standards for curriculum content and reliability of resources. Training students in the role of researcher offers guided opportunities and teachable moments that allow them to hone their research skills.

## *Global Communicators and Collaborators*

It wasn't that long ago when it was cost prohibitive to have your class connect with other classes and subject experts around the world. That time is gone! In an ever-shrinking world, we now have free access to make these very connections. In chapter 5 (page 65), you learn how educators are using Skype ([www.skype.com](http://www.skype.com)) and other online tools to establish and maintain working relationships via the Internet with classrooms and topic experts from around the world. (Visit **[go.solution-tree.com/instruction](http://go.solution-tree.com/instruction)** for live links to the websites mentioned in this book.) Students can develop questions, conduct interviews, and build their skills in online learning and collaboration with people from different countries and cultures. This Digital Learning Farm job offers hundreds of opportunities for any adventurous group of students to bring the world into its classroom.

These jobs offer just four examples of work that gives students valuable opportunities to make real contributions to their learning community. While educators can implement these and other student jobs individually, we can create a more balanced approach to teaching and learning by bringing multiple jobs together to work in harmony. I have talked with educators who assign different jobs to their students. If the work results in meaningful activities that advance student contributions and ownership in the learning process, it probably deserves a place in the classroom.

## Taking It Home: The Role of Parent Support

We should also acknowledge the role of parents in making this educational model work. We have seen that under the Digital Learning Farm model, students take on a number of new jobs—taking notes for an entire classroom, documenting research, interviewing outside resources, recording and posting those interviews on class blogs, and more. Students working in this environment often do a number of jobs that in the past their teachers would have done. All of this means that parents may very well see their children spending less time on traditional homework and more time on creating content that benefits other students.

As I mentioned earlier, the Internet is one of the most powerful tools for involving parents in the education process. By enabling parents to visit the classroom and view student work through communication technologies, teachers provide parents with a means of participating directly in their children's education, no matter how busy their schedule or how long their commute might be. Because much of the work students do as scribes, reporters, and content providers is posted online, parents also will be able to see and use the work their children are producing. And as the Digital Learning Farm model builds skills in teamwork, students will be better able—and more willing—to partner with their parents and teachers in completing projects and accomplishing their educational goals. This educational transparency also enables parents and teachers to collaborate more fully in tracking and discussing student progress, attacking problems as they develop, and helping students remain engaged in learning. Indeed, there are wonderful stories from Digital Learning Farm classrooms where parents are as active in watching online tutorials as their children. Think about all the parents who don't know math well enough to help their children with it; in the Digital Learning Farm model, parents would be able to sit with their children and review tutorials produced by other children.

Of course, the digital divide remains a serious problem, as many students still do not have access to computers and other technology tools in their homes. This is a problem that we must address as a society if we want our students to thrive and remain competitive in a global economy that demands technical savvy. However, many educators are finding ways to make these learning opportunities available to everyone in their class, whether or not they have a home computer and online access. In some schools, librarians are given flextime, and the libraries are open before and after school.

## Strengthening the Bridge Between School and Home

Building stronger collaborative ties between educators, students, and their families requires a communications infrastructure that links every teacher and every family to the Internet. But the paybacks of that infrastructure more than outweigh its costs. In addition to giving educators, students, and families a more accessible means of communication, this kind of network can also serve as a vital source of information. I recommend that schools set guidelines for teacher contributions to the school home page that include:

- Frequently asked questions from parents
- Goals for every course
- Examples of past students' work
- Recommended homework assignments for the entire year
- Hot-button connections to other sites on the web that support learning
- Action research projects

## Balancing Responsibility, Shifting Control

While the majority of educators whom I have met support the concept of children owning or leading more of their own learning, the move to the Digital Learning Farm model can be a very difficult transition. As I learned in my own teaching, students initially can be very uncomfortable when asked to accept more responsibility for their educational materials and processes after years of having their learning managed for them. Some teachers report, for example, that their students have to adjust to the idea of taking notes that will be used (and reviewed) by their peers. Educators may need to adjust to this model too, as some of the responsibility for introducing ideas and techniques shifts to students (rather than remaining solely with the teacher). Parents may also question why their children are spending hours designing a math tutorial for one problem, rather than using that time to do ten problems at the end of the book. After all, they may wonder, isn't building instructional material the job of the teacher? Even when faced with this initial resistance, however, every teacher I have spoken to who has made the transition says it was well worth the effort.

With all of those shifts in control come some amazing changes in outcomes as students and educators benefit from the motivating drives of autonomy, mastery, and purpose. Once students realize that they are valued for their contributions to the learning community, it is not unusual for them to add examples to class notes, or

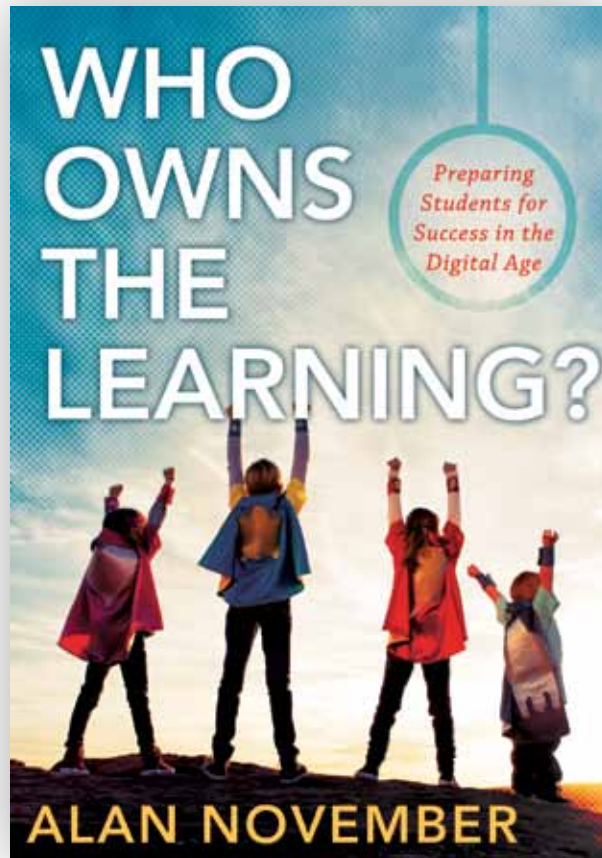
to add a link to a tutorial, or to have extended conversations outside of class about subject content.

Today, I could do the community resource center project I told you about earlier in this chapter, without the one-dollar barbershop. I'd teach the kids to organize a website containing a Google map tagged with all of the city's medical services. Students could capture digital images and videos and geotag locations with their cell phones. They could add a list of services and interviews with personnel with links to the site listings—all in multiple languages—which could bring critical health-care information to tens of thousands of city residents. Each year, a team of students could update and maintain the website. If I had to, I bet I could link the site content to core curriculum in biology. And I doubt that my students' test scores would suffer from the depth and detail of this purposeful work. The project would be different than it was thirty years ago, but it would be right for the 21st century classroom, with more relevant activities for our students and better outcomes for them and the community at large. It would be a project that the student authors could show off to their friends and family wherever there was Internet access. Their grandmother might make good use of the website to locate important medical services. It may even motivate other students around the world to want to build a similar interactive health resource map for their region.

Our approach to education must evolve along with its tools, processes, and outcomes. We are already experiencing a cultural shift toward collaboration and learning empowerment in U.S. schools, as we realize that we must go beyond testing to have students demonstrate that they own their learning experiences and can apply the knowledge they have learned.

## Questions for Discussion

1. As an educator, do you anticipate resistance from students as you ask them to make more of a contribution to the benefit of the class? How might parents react to this shift?
2. What first steps might you take in building a learning community where your students take on more responsibility for contributing to the learning of the class?
3. What evidence have you seen that corroborates Daniel Pink's assertion that autonomy, mastery, and purpose are the elements of true motivation and, therefore, indicators of high-quality work?
4. Do you agree that we need to fundamentally change the culture of teaching and learning to make better use of the powerful tools of information and communication technology? How could you begin that process?



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